BEFORE THE
POSTAL REGULATORY COMMISSION
WASHINGTON, D.C. 20268–0001

PERIODIC REPORTING (PROPOSAL SEVEN)	Docket No. RM2015-16

PETITION OF THE UNITED STATES POSTAL SERVICE FOR THE
INITIATION OF A PROCEEDING TO CONSIDER PROPOSED CHANGES
IN ANALYTICAL PRINCIPLES (PROPOSAL SEVEN)
(August 5, 2015)

Pursuant to 39 C.F.R. § 3050.11, the Postal Service requests that the

Commission initiate a rulemaking proceeding to consider a proposal to change

analytical principles relating to the Postal Service's periodic reports. The proposal,

submitted in response to numbered paragraph 5 on page 62 of Order No. 2472 (Docket

No. R2015-4 May 7, 2015), relates to avoided costs for FSS workshare discounts, is

labeled Proposal Seven, and is discussed in detail (in two separate sections) in the

attached text.

Respectfully submitted,

UNITED STATES POSTAL SERVICE

By its attorneys:

Daniel J. Foucheaux, Jr.
Chief Counsel, Pricing & Product Support

Eric P. Koetting

475 L'Enfant Plaza, S.W.
Washington, D.C. 20260-1137
(202) 277-6333
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PROPOSAL SEVEN

In Order No. 2472, the Commission sought submission of a proposal to address the avoided costs relating to FSS mail. Since the components of those avoided costs come from two distinct sources, however, Proposal Seven is bifurcated into two sections. The first section deals with the Mail Processing elements of the proposal, specifically relating to the Mail Processing cost models customarily submitted with the ACR. The second section deals with the Delivery elements and the Delivery cost model customarily submitted with the ACR.

SECTION ONE: PROPOSED CHANGE IN STANDARD FLATS MODEL TO ESTIMATE MAIL PROCESSING COST AVOIDANCES FOR FSS-RATED STANDARD FLATS

OBJECTIVE:

This section of Proposal Seven seeks to modify the modeling methodology used in the USPS-FY14-11 (Docket No. ACR2014) Standard Mail Flats Cost Model so as to produce estimates of mail processing cost avoidances of Flats Sequencing System (FSS) presorted Standard Flats. The general architecture of the model is retained, but expanded to explicitly model the unique characteristics and flows of FSS-prepared Standard Flats. Additional modifications are made to the flows of bundles and pieces to reflect the increased incoming secondary sortation that occurs in plants on automated equipment as a result of this mail preparation. The three Excel models supporting this section of Proposal Seven are all included as part of USPS-RM2015-16/1.

BACKGROUND:

Beginning in FY 2010 the Postal Service began deploying the Flats Sequencing System (FSS). The FSS enables the Postal Service to sequence flat-shaped pieces in delivery point order, thus eliminating the need for carriers to manually sequence (case) flats for delivery. In FSS zones, the Carrier Route presort does not provide any mail processing efficiencies, as these pieces are processed identically to non-Carrier Route pieces on the FSS. Carrier Route preparation results in an increased number of bundles that need to be opened and prepped for FSS processing. In order to increase the efficacy of the FSS, the Postal Service instituted FSS preparation requirements for FSS zones in January 2014. Under FSS preparation requirements, pieces that would have previously qualified for 5-Digit and Carrier Route rates are required to be merged together into FSS bundles, thus reducing the number of bundles to be prepared by the mailer while also reducing the number of bundles needing to be sorted and opened for preparation for the Postal Service. In addition to the FSS bundle preparation requirements, additional containerization requirements were instituted, the most pertinent being the preparation of FSS scheme containers. Having mail prepared in FSS Scheme containers enables personnel in Postal Service operations to take these containers directly to FSS preparation operations without having to first sort the bundles to FSS scheme.

To encourage and reward FSS preparation, the Postal Service in Docket No. R2015-4 introduced a rate element in Standard Flats for pieces presorted to 5-Digit ZIP codes that are processed on the Flats Sequencing System. Under the FSS preparation requirement, customers are required to prepare FSS Scheme bundles when they have

10 or more pieces destinating in a FSS scheme as defined in the Postal services labeling list L006. The FSS presort replaces both 5-Digit presort and Basic Carrier Route presort for mail in L006 zones.

In order to assess the Postal Services compliance with 39 U.S.C. 3622, it has been deemed necessary for the Postal Service to provide the Postal Regulatory Commission with estimates of the relative mail processing costs of pieces qualifying for FSS rates. The changes to the Standard Flats model are responsive mail processing component of Order No. 2472 (May 7, 2017) wherein the Commission stated:

> 5. The Postal Service is directed to file a proposed methodology for determining the costs avoided for the Presorted FSS workshare discounts, as described in the body of this Order, within 90 days of the date of this Order.

The methodological changes proposed in this section satisfy the mail processing portion of these requirements.

In addition to the aforementioned FSS changes, methodological changes are made to reflect operational changes in incoming secondary operations. Increasingly, the incoming secondary sort is being performed in mail processing plants on mechanized equipment rather than in the delivery units manually. When the incoming secondary sort is performed in the plant, bundles are isolated by incoming secondary scheme on the APPS/APBS and sent directly to the mechanized operation. Thus, an additional bundle sort is not required at the delivery unit. Modifications are made to the model to reflect this processing reality.

The transition to FSS prep requirements began in January 2014. Some customers required additional time to comply with the new requirements and exceptions

to the requirements were granted. In order to give a more complete picture of the

preparation profile under the new FSS preparation regime a hybrid years profile is

created (Q3 FY2014 – Q2 FY2015). The measured costs are those used in the 2014

ACR for Standard Mail Flats. As such the calibrating volumes used in this proposal will

not correspond to the preparation profile in existence when the cost were measured.

PROPOSAL:

There are several components to this section of Proposal Seven. While all of the

following are applied to the Standard Mail Flats model, two of the modifications are

applicable to the Periodicals model – Modification 1 and Modification 9. In the structure

of the ACR 2014 Periodicals model, the methodology for modeling FSS bundles had

already been established, however Modifications 1 and 9 improve the accuracy of the

existing Periodicals model:

1. Revision of the methodology used to estimate the proportion of flats processed in

    mechanized incoming secondary operations.

    Over the past couple of decades, there has been a general increase in the

    percentage of flat-shaped mail processed in mechanized incoming secondary

    operations, due to advances in sortation technologies, flats volume declines, and

    plant consolidations. While over 98 percent of flats destinate in the service

    territories of plants that have mechanized equipment, not every zone served by

    these plants is processed in mechanized incoming secondary operations. There

    are a multitude of reasons why a facility may choose to perform the incoming

secondary manually, typically at the delivery unit. These reasons include low volume for the zone, service commitments, and operating window/capacity constraints.

Conceptually, the calculation of this parameter is straight forward – it is the ratio of the volume of pieces worked on mechanized equipment to the total volume of mail requiring incoming secondary sortation. However this calculation is made more complex due to the fact that in today's environment, mechanized incoming secondary is performed on two different technologies, the AFSM 100 and the FSS. It is further complicated because available measures of mechanized incoming secondary volume (MODS TPF) include letter shaped mail worked in flats operations, pieces entered in Carrier Route bundles that have broken and thus require IS sortation, rejects from FSS operations, and pieces in FSS zones that are not worked on the FSS. It is necessary to account for each of these flows, as failure to account for them will likely result in the nonsensical results that the number of flats receiving mechanized incoming secondary exceeds candidate volume.

The first step in this process is to separate the pools of candidate mail into the volume that destinate in FSS zones (as defined by L006) and non-FSS zones. Unfortunately, reliable measures of mail volume by 5-Digit zone and class simply do not exist. To obtain an estimate of the distribution of volume by FSS/non-FSS, the Address Management System (AMS) data which provides active

delivery point information by carrier route are aggregated by 5-Digit zone to give

the number of active delivery points by 5-Digit zone. To account for variability in

volume per delivery point, ODIS data are used to calculate the volume per

delivery point by 3-Digit zone. This measure of volume per delivery point is

applied to 5-Digit zone to estimate volume per 5-Digit zone by class. Admittedly,

it would be preferable to use actual volume by 5-Digit zone, but this information

simply does not exist. Next these estimated FSS/non-FSS proportions are

applied to RPW candidate volume to give estimates of the RPW volume that

destinates in FSS zones and non FSS zones.

Next, IOCS cost data are used to remove letters from FSS and AFSM 100

MODS. The MODS data record the number of pieces processed by MODS

operational code – which for the AFSM 100 and FSS generally equates to

processing scheme. These machine counts cannot distinguish shape or class.

Pieces that are entered as letters, pay letter rates, and are recorded in RPW

letter categories are sometimes processed on flat equipment. Some pieces that

qualify for letter rates do not run properly on letter equipment, typically these are

booklets or large cards. To obtain a measure of the number of flat-shaped

pieces processed in FSS and AFSM100 operations, the ratio of letter costs in

FSS and AFSM 100 operations to total costs in FSS and AFSM 100 operations

(this is the proportion of costs in FSS operations that is due to processing letter

mail) is multiplied by MODS TPH thus giving an estimate of the number of letters

processed on FSS equipment. The result is subtracted from MODS TPH giving

an estimate of the number of flat shaped pieces processed on FSS and AFSM 100 equipment. This methodology implicitly assumes that AFSM 100 and FSS productivities are invariant to the shape of the pieces being processed. This is a reasonable assumption as the productivity is machine-paced. The letter proportion adjustment is applied to FSS TPF (Total Pieces Fed) and TPH (Total Pieces Handled) and AFSM TPF.

The number of pieces that flow into IS operations from broken Carrier Route bundles is calculated using the methodology proposed in Proposal 29 (Docket No. RM2010-6) and approved in Order No. 400 (Jan. 28, 2010), wherein the pieces in Standard Carrier Route and Periodicals Carrier Route non-5-Digit containers are multiplied by the bundle breakage factor. Bundles on 5-Digit containers would not be processed until they reached the delivery unit, and thus would be processed in manual IS operation at the delivery unit if the bundle were to break. These pieces are then split between FSS zone and non-FSS zone using the FSS coverage factors calculated above.[1]

Mechanized IS coverage is then calculated by taking total candidate RPW volume (First Class Flats, Standard Mail Flats, non-CR Periodicals, Presorted BPM Flats, Other Miscellaneous flats – USPS, Free Mail, Package Services, Priority), and subtracting flats destinating in FSS zones. This represents the quantity of mail requiring IS sortation that does not destinate in a FSS zone. The

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[1] In the future this step will not be necessary as pieces in Carrier Route bundles will by definition be non-FSS.

corresponding volume of mail that is processed on mechanized equipment is

calculates by taking MODS letter adjusted AFSM 100 IS TPH and subtracting

three amounts, -- the amount of FSS rejects (the difference between MODS letter

adjusted FSS TPF and MODS letter adjusted FSS TPH), the amount of the

volume of mail destinating in FSS zones that is not process on the FSS (the

difference between RPW FSS flats and MODS letter adjusted FSS TPF), and the

amount of non-FSS pieces from carrier route bundles. The ratio of non-FSS

mechanized IS volume to non-FSS candidate volume gives the estimate of the

proportion of non-FSS zone volume that is processed on mechanized equipment.

The final step is to weight the FSS mechanized IS proportion with the non-FSS

proportion. Here it is assumed that all pieces in FSS zones will receive a

mechanized IS sort either on the FSS itself, or on the AFSM 100 (if the piece is

rejected from the FSS or bypasses the FSS). The result will feed into both the

Standard Flats model and Periodicals model as the national mechanized FSS

coverage proportion.

2. Changes to Bundle Processing Flows to Account for Increased Mechanized
   Incoming Secondary Piece Processing

If the incoming secondary piece sort is going to be processed on mechanized

equipment, then 5-Digit bundles will be isolated for these zones on the incoming

primary bundle sort. Bundles for these zones will not incur an incoming

secondary bundle sort. Bundles for zones worked manually are typically "jackpotted" with carrier route bundles and will incur an additional bundle sort at the delivery unit.

In this proposal the bundle flow formulae are adjusted to be consistent with the mechanized incoming secondary piece distribution calculated above in the first component of this Proposal.

3. Introduction of FSS Bundle Flows

Bundle flows for FSS bundles are calculated using the methodology used for other bundle types, with the exception that it is assumed that all FSS bundles will be isolated and finalized at the plant. In other words, it is assumed that no FSS bundles will incur a sortation at the delivery unit.

4. FSS Presort Piece Model and Costs

The pieces that are presorted for the FSS are explicitly modeled using the same basic methodology previously used to model piece flows. FSS presorted pieces flow directly into piece sortation operation at the FSS level, bypassing outgoing primary, outgoing secondary, managed mail, and incoming primary operations.

5. Updating 5-Digit Piece Model and Costs

The introduction of FSS presort necessitates changes be made to the 5-Digit

model. Pieces that qualify for the 5-Digit rate, by definition, do not flow into FSS

operations. The flows of 5-Digit pieces are changed to reflect this reality. The

mechanized IS incidence for 5-Digit pieces is calculated to account for the fact

that the IS incidence is different for 5-Digit pieces than for the general population

of MADC, ADC, and 3-Digit pieces. While MADC, ADC, and 3-Digit pieces can

flow to the FSS, 5-Digit pieces, by definition, do not. As a result the relative

incidence of manual IS sortation is higher for 5-Digit pieces by a factor of one

over one minus the FSS coverage factor.

6. Updating MADC, ADC, 3-Digit for Incoming Secondary Coverage

MADC, ADC, and 3-Digit models are updated to incorporate the recalculation of

the mechanized IS sortation.

To clarify the model flows within MADC, ADC and 3-Digit presorted it is important

to make the distinction between FSS prepped pieces and pieces processed on

the FSS. When the term FSS prepped pieces is used it refers to instances

where, for a given L006 zone, there are 10 or more pieces destinating in the

L006 zone that are prepared in an FSS bundle. Not all pieces destinating in an

L006 zone will qualify for FSS prep. In Standard Mail when fewer than 10 pieces

destinate in an L006 zone these pieces are required to be prepared in 3-Digit,

ADC or MADC bundles depending on whether they meet the 10 piece

qualification standard for the presort zone. As a result some mail prepared in 3-

Digit, ADC, and MADC will incur FSS processing.

7. Explicit Modeling of Prep

The hours associated with mail preparation for the FSS (MODS Operation 530)

are included in the calculation of the FSS productivities. This is not the case with

AFSM 100 productivities. This leads to an inconsistency that results in a portion

of AFSM 100 preparation costs being allocated to FSS prepared pieces through

the CRA adjustment factor. To correct this, AFSM 100 prep costs are explicitly

modeled using the methodology used in the Periodicals Flats Mail Processing

Model.[2]

8. CRA Adjustment factor adjusted for the FSS

The CRA adjustment factor is the mechanism used to calibrate the model to CRA

costs and to distribute non-modeled costs to rate element. The assumption

made in applying the CRA adjustment factor is that non-modeled activities (allied,

platform, inter-operational transit) are incurred in proportion to explicitly modeled

costs (bundle and piece sortation). In a FSS environment this assumption fails.

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[2] The modeling and productivity estimates in the Periodicals Model were introduced in
Proposal 12 (Docket No. RM2009-1) and accepted in Order No. 170 (Jan. 12, 2009).

The allied and platform costs incurred by FSS pieces are likely similar to those incurred by 5-Digit pieces. Like FSS pieces, the majority of 5-Digit pieces are submitted levels of containers where the resident bundles require a single bundle sort prior to piece distribution (SCF, 3-Digit, FSS Facility). Like FSS pieces, 5-Digit pieces require a single piece distribution operation prior to being distributed to the carrier. However due to the lower productivity and higher piggy-back factor of the FSS, the direct costs attributed to FSS pieces are significantly higher than those attributed to 5-Digit pieces. Applying the CRA adjustment factor as is done in current methodology will distort measured cost avoidances by over-distributing non-modeled costs to FSS pieces.

Under this proposal, the CRA adjustment factor is calculated to insure the non-modeled costs distributed to FSS pieces are equal to those distributed to 5-Digit pieces.

9. FSS Realization Factor

In FSS processing, only pieces available for processing before or during first-pass processing can be successfully sequenced. Mail arriving after the end of first-pass processing cannot be sequenced, and will either be curtailed until the next day's processing or diverted to parallel sortation operations for the zone. As a result, not all mail that destinates in a FSS zone will be processed on the FSS. Some mail will be diverted to parallel AFSM 100 operations to avoid delaying the

mail. To capture these flows, a FSS Realization Factor is introduced. The FSS realization factor is intended to be a measure of the proportion of FSS eligible mail that is processed on the FSS.

The FSS realization factor is estimated by the ratio of MODS FSS TPF, after accounting for letters processed on the FSS, to FSS candidate volume.

Section Two: Proposed Method for Calculating Delivery Costs for Periodicals Flats, Bound Printed Matter Flats, Standard Flats, and Carrier Route Flats Destinating in FSS ZIP Codes

OBJECTIVE

This section of the proposal offers a method to disaggregate delivery costs for Periodicals Flats, Bound Printed Matter Flats, Standard Flats, and Carrier Route Flats[1] between those destinating in Flat Sequencing System (FSS) ZIP Codes (Zones) and those destinating in non-FSS Zones.

BACKGROUND

Delivery costs in the postal regulatory environment encompass direct labor costs of city and rural carriers, and all indirect costs incurred from supporting the direct costs. City carrier direct costs are partitioned between in-office (cost segment 6) and street activities (cost segment 7). Rural carrier office and street activities are combined into one cost segment (cost segment 10). Indirect costs are incurred from items that support carriers' direct activities. Examples of indirect costs are vehicle maintenance, space utilization of carrier equipment, and supervision. These costs are normally applied by the use of a piggyback factor, which is the ratio, by product, of the sum of direct and indirect costs to the direct costs. This proposal utilizes the same methods to disaggregate delivery costs between those destinating in FSS Zones and those destinating in non-FSS Zones.

In its Order, the Commission directed the Postal Service to file a proposed methodology for determining the costs avoided for the presorted workshare FSS

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[1] Does not include High Density or Saturation.

discounts within 90 days.[2] In the body of its Order, the Commission stated that delivery

cost differences may exist between Presorted FSS rates categories and other flat rates.

> First in calculating the avoided costs for the new
> workshare passthroughs for Presorted FSS Standard Mail
> Flats and Outside County Periodicals, the Postal Service
> did not include any FSS-specific delivery costs in its estimate
> of the cost of Presorted FSS pieces. Although the Postal
> Service implies that the delivery costs for 3 digit mail and FSS
> mail are the same (cost segments 6 and 7), the Commission
> believes that differences may exist in the delivery cost of
> Presorted FSS mail and the delivery cost of 3 digit mail. In
> particular, FSS flats do not need to be cased by carriers,
> while 3 digit Flats do. Further, in Docket No. RM2015-7,
> the Postal Service has proposed a delivery cost model that
> differentiates city carrier delivery time variabilities between
> FSS and other types of mail. Thus, FSS flats may also have a
> different unit cost for cost segment 7, City Carrier Street Time.[3]

One interpretation of that paragraph is that the Commission is seeking the

computation of separate delivery costs for flats that pay FSS rates and for flats that do

not. However, the Postal Service does not believe that the delivery costs should be

disaggregated that way, even if the data existed to do so (which is not the case). The

example cited illustrates a misconception regarding FSS rated mail. FSS machines are

strategically located throughout the network for efficiency in processing flats. The

Zones processed on FSS equipment were not randomly chosen, they were selected

based on historical volumes. Nonetheless, FSS equipment processes all eligible flats

destinating to FSS Zones, not just flats entered in FSS bundles. Thus, a 3-digit, ADC,

or MADC flat rated piece destinating to a FSS Zone is just as likely to be finalized on

FSS equipment and avoid casing as a comparable FSS rated flat would be. For that

reason, this proposal disaggregates delivery costs between flats destinating in FSS

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[2] See Docket No. R2015-4, Order No. 2472, May 7, 2015 at 62.
[3] Id. at 29-30.

Zones and those destinating in non-FSS Zones, rather than distinguishing delivery costs between flats that pay FSS rates and those that do not. This disaggregation not only can be approximated with available data, but also constitutes the most reasonable method to compute the impact of FSS equipment on delivery costs.

As is currently done in ACR folder 19 to disaggregate delivery costs within First-Class Presort Letters and Standard Mail Letters, the proposed method uses operational assumptions and models rather than data directly collected from the cost systems. In sum, this proposal addresses the mandate in Order No. 2472 regarding delivery costs by calculating separate delivery costs for the relevant products based on whether pieces are destinating in FSS Zones or not.

The specific formulae used to make the necessary calculations outlined in the Proposal Section are contained in the Appendix.

PROPOSAL

In the ACR, the Postal Service computes delivery costs in USPS-FY14-19 using the Commission methodology. Folder 19 disaggregates the delivery costs by shape and rate category within several products as defined by Mail Classification Schedule (MCS). An underlying principle of the established method is that the sum of the disaggregated delivery costs underlying a MCS product equals the delivery cost at the MCS product level. Thus, the proposed method for computing delivery costs for pieces destinating in FSS/non-FSS Zones will begin with a product's component group costs in cost segments 6, 7, and 10. For illustration purposes, the following table shows the component group costs for Periodicals Flats from USPS-FY14-19. The objective is to

disaggregate the costs and volume in row (1) into rows (2) and (3) such that

(1) = (2) + (3).

Table 1 – Illustration of Dividing Delivery Costs into FSS Zones and Non-FSS Zones[4]

Product	Row	6.1 In-Office Direct Labor, Casing ($000)	6.1 In-Office Direct Labor, Non-Casing	6.2 In-Office Overhead, & Support Burdened on Office	7.2 Delivery Activities	7.3 Delivery Activities Support	6.2 In-Office Support Burdened on Street	10 Rural Carriers	Volume
Periodicals Flats	(1)	174,300	30,634	57,748	122,068	14,564	6,159	158,460	5,988,105
Periodicals Flats FSS Zones	(2)								
Periodicals Flats non-FSS Zones	(3)								

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Cost Segment 6 – City Carrier In-Office Activities

FSS processing obviates the need for manual casing by carriers. Ideally, all flats destinating in FSS Zones would be successfully finalized by FSS equipment. This would result in trivial, if any, 6.1 In-Office Direct Casing costs for these pieces. However, for three primary reasons, not all flats destinating in FSS Zones are finalized by FSS equipment. One, non-machinable flats are not eligible for FSS processing. Two, flats that miss the Critical Entry Time (CET) may still be processed on the AFSM100 or manually for service reasons. Three, a portion of pieces that begin FSS processing are rejected and are ultimately sorted on the AFSM100 or manually. Pieces that fail to be finalized by FSS equipment need to be manually sorted by the carrier and incur in-office direct casing costs.

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[4] The costs shown in row (1) can be found USPS-FY14-19, tab Summary BY, line 43. Proposal Thirteen, however, derives different costs for component groups 7.2, 7.3, and 6.2. The corresponding Periodical costs under Proposal Thirteen are located in USPS-RM2015-16/1,Prop.Seven. CS06&7.RM2015.7.Prop.Thirteen.FY14.xlsx.

A product's FSS Zone 6.1 Direct Labor Casing cost is equal to the cased volume multiplied by a product's unit casing cost per RPW cased piece. Cased volume by product is equal to the volume destinating in FSS Zones multiplied by the proportion that is not finalized on FSS equipment. The remaining 6.1 Direct Labor Casing costs are assigned to a product's non-FSS Zone cost.

For Direct Labor Non-Casing, all pieces receive the same unit cost The 6.2 In-Office support costs are assigned proportionally based on their respective office and street assignments. These methods for disaggregating city in-office costs are analogous to the established methods currently utilized to disaggregate corresponding costs within First-Class Presort and Standard Letters in folder 19 of the ACR.

Cost Segment 7 – City Carrier Street Activities

As with cost segment 6, the purpose is to disaggregate the city street costs into FSS/non-FSS Zone costs by product. Proposal Thirteen provides different cost pools on letter routes for cased mail and FSS pieces.[5] A product's FSS Zone letter route delivery activities cost comes from four sources: 1) street costs for destinating FSS Zone mail that is not finalized on FSS equipment and is subsequently cased and delivered with the cased mail; 2) street costs for destinating FSS Zone mail that is finalized on FSS equipment but is collated and delivered with cased mail; 3) street costs

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[5] For simplicity purposes, this proposal is described with reference to the procedures that would be applicable in an environment in which currently pending Proposal Thirteen (Docket No. RM2015-7) were already implemented. However, the Excel file included with USPS-RM2015-16/1 calculates the delivery costs both with and without the adoption of Proposal Thirteen. The current methodology assigns the same city *street* costs for all flats, regardless of the manner they were processed, but due to the differences in city in-office and rural carrier treatment of destinating FSS Zone pieces, the overall delivery costs (across segments 6, 7, and 10) using the current method do not equal the corresponding ones filed in USPS-FY14-19.

for delivering destinating FSS Zone mail in a FSS separate bundle; and 4) street costs for destinating FSS Zone mail from cost pools other than cased mail and FSS.

1. Street Costs for Mail not Finalized on FSS Equipment

As previously discussed under Cost Segment 6, not all pieces destinating in FSS Zones are finalized on FSS equipment. Those pieces not finalized on FSS equipment require manual casing by the carrier and are delivered with other cased mail. Thus, analogous to the method used to disaggregate 6.1 direct casing costs, pieces destinating in FSS Zones that are not finalized on FSS equipment are assigned the cost equal to a product's cased volume multiplied by its unit letter route cost per RPW cased piece. Those pieces destinating in non-FSS Zones receive the difference between the total cased mail cost pool and the FSS Zone cased mail cost.

2. Street Costs for FSS Mail collated with Cased Mail

For contractual reasons, city carriers are occasionally instructed to collate the mail in their FSS tray with their cased mail to consolidate two bundles to one. Under this scenario, the flats finalized by FSS equipment are being delivered along with the other cased mail as they would be in a non-FSS Zone. Thus, for attributable costing purposes, the collated pieces should be assigned the marginal cost of cased mail rather than the corresponding cost of FSS mail. However, the City Carrier Cost System (CCCS) does not currently collect data on whether the carrier will collate the FSS and cased mail.[6] Consequently, for FY 2014, a portion of a product's FSS costs are shifted to cased mail. Mechanically, this is done by multiplying the proportion of FSS costs shifted (due to collation) by the ratio of the marginal times of cased mail to FSS mail.

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[6] This information is expected to be available starting in Q1 FY 2016. Once it is available the costs will be properly shifted prior to assigning the costs to products within each cost pool.

Under Proposal Thirteen, the marginal street times for cased mail and FSS are 2.79 and

5.21 seconds respectively.[7]

3. Street Costs for Delivering from Separate FSS Bundle

The costs that remain in the FSS cost pool after step 2 is completed are

assigned to a product's FSS Zone costs.

4. Street Costs from Other Cost Pools

Small amounts of street costs are derived from cost pools other than cased mail

and FSS. A Standard Flat more than three-quarters of an inch thick, for example,

receives parcel rather than flats street time cost. For consistency with the Cost and

Revenue Analysis (CRA) report and folder 19, these costs must be accounted for in this

proposal. Costs from cost pools other than Cased Mail and FSS are disaggregated

proportional to volume destinating in FSS/non-FSS Zones.

Thus, a product's FSS Zone letter route delivery activities cost is the sum of

costs calculated in steps one through four. A product's non-FSS Zone letter route

delivery activities costs are computed by aggregating the costs in steps one and four

(costs for steps two and three are zero for pieces destinating in non-FSS Zones).

Since the marginal time is lower for cased mail than for FSS mail, a product's

disaggregated letter route delivery activities cost in this exercise is less than its

corresponding aggregated cost.[8]

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[7] See Docket No. RM2015-7/1, City Carrier Street Time Study Report at 79.
[8] Precedent does exist for shifting delivery costs between cost pools. Shifting rural delivery costs between shapes was done in the delivery model prior to Docket No. R2005-1. See Docket No. R2000-1 testimony of Sharon Daniel (USPS-T-28) at 23. This shift, however, results in component group 7.2 (1) < (2) + (3) from Table 1. Once CCCS starts collecting the information, however, the costs can be shifted prior to assignment to products and thus at that time (1) will equal (2) + (3).

The special purpose route (i.e. non-letter route) delivery activities costs are disaggregated proportional to volume destinating in FSS/non-FSS Zones. Lastly, the 7.3 Delivery Activities Support costs are burdened on a product's 7.2 costs, separately for letter and special purpose route costs as they are under the established method.

Cost Segment 10 – Rural Carriers

Rural carriers are compensated based on an evaluation system where the carrier receives a time allotment for performing various activities. To disaggregate the costs, between FSS/non-FSS Zones, the crucial evaluation factors are 'Other Flats' and 'DPS Flats'.[9] For flats destinating in FSS Zones that are not finalized by FSS equipment, rural carriers receive 'Other Flat' credit rather than 'FSS Flat' credit. Thus, a product's FSS Zone rural delivery cost is the sum of its 'FSS' cost pool, a portion of its 'Other Flats' cost pool, and costs from other cost pools.

The entire FSS cost pool is assigned to a product's FSS Zone cost.[10] The portion of the 'Other Flats' cost pool assigned to a product's FSS Zone cost is calculated by multiplying its rural unit 'Other Flats' cost per RPW cased piece by the FSS Zone destinating cased volume. Cased volume by product is equal to the volume destinating in FSS Zones multiplied by the proportion that is not finalized on FSS equipment. A product's non-FSS Zone 'Other Flats' cost is the difference between its total 'Other Flats' cost and its FSS-Zone 'Other Flats' cost. As with city carrier street

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[9] DPS Flats are flats finalized on FSS equipment. This proposal will instead use the term FSS flats for consistency with CS10 and folder 19. Rural carriers receive 6 seconds of credit for an 'Other Flat', 3.5 seconds credit for a FSS Flat delivered via a privately owned vehicle, and 1.4 seconds credit for a FSS flat delivered with a Postal Service owned vehicle.

[10] Rural carriers are not bound by the same bundle restrictions as city carriers, so there is no need to shift costs between FSS and Other Flats.

time costs, a product's costs from other cost pools are assigned proportional to volume.[11]

FSS Zone/Non-FSS Zone – RPW Volume

An important component of unit costs is the denominator – destinating volume. In order to maintain consistency between the numerator and denominator, the destinating volume is disaggregated into two buckets, flats destinating in FSS Zones and flats destinating in non-FSS Zones. The disaggregated product volumes used to calculate the delivery costs are based on analyzing data from the Mail Characteristics Study from USPS-FY14-14 and a 'hybrid' year from PQ3 FY 2014 through PQ2 FY 2015, using the FY 2014 destinating volume as a control total.

Beginning in PQ2 of FY 2014, flats destinating in FSS Zones were required to be prepared in FSS bundles if volume thresholds were met (i.e. six pieces in Periodicals and ten pieces in Standard). In PQ2 of FY 2014, exceptions were granted for mailers having difficulty with this preparation change. Docket No. R2015-4 used PQ3 and PQ4 FY 2015 data to infer the preparation characteristics for FY 2014 as this was the only information available. To improve accuracy, this proposal utilizes a hybrid year rather than the volumes filed with Docket No. R2015-4. To estimate the volume of Standard Flats destinating in FSS Zones, the proportion of 5-Digit rated mail prepared in FSS bundles in the hybrid year is applied to FY 2014 volume. To estimate the volume of Standard Carrier Route mail destinating in FSS Zones, the proportion of Carrier Route rated mail prepared in FSS bundles in the hybrid year is applied to FY 2014 volume. The volume of Periodicals destinating in FSS Zones is derived by applying the

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[11] Aside from the same issues that occur on city routes, rural carriers have slightly different shape definitions for compensation purposes than the DMM, so these products can incur minimal amounts of costs from these cost pools.

proportion of 5-Digit and Carrier Route rated Periodicals prepared in FSS bundles in the hybrid year to FY 2014 Periodicals.

Because BPM mailers were slow to adopt FSS preparation, and because FSS preparation of Standard High Density and High Density Plus is optional, a different approach was needed. To estimate the FSS Zone destination volumes for these two categories, the Address Management System (AMS) delivery point data are mapped to FSS Zone using L006. This gives the active delivery points by FSS Zones. To control for inter-zone variation in destinating volume, the AMS delivery point data are weighted by ODIS destinating volume to derive an estimate of 5-Digit volume separately for FSS and non-FSS Zones. These proportions were then applied to FY 2014 volumes to calculate the respective BPM volumes included as part of this proposal.

RATIONALE

Two key elements of this proposal that warrant further support are estimates of 1) the proportion of flats destinating in FSS Zones that are not finalized by FSS equipment and 2) the proportion of FSS flats collated with cased mail by city carriers.

As previously discussed, not all flats destinating in FSS Zones are finalized on FSS equipment. Flats that are not finalized by FSS equipment are required to be manually sequenced by carriers for delivery and incur higher delivery costs. Thus, the higher the proportion of flats destinating in FSS Zones that are not finalized by FSS equipment, the lower the difference in delivery costs between flats destinating in FSS/non-FSS Zones.

Three primary reasons were previously cited for flats destined in FSS Zones to not be finalized on FSS equipment. They were 1) non-machinability, 2) flats that miss

their CET and therefore have to be processed on AFSM100 or manually for service reasons, and 3) flats rejected by FSS equipment. Non-machinable flats encompass a negligible amount of volume, and are considered to be one percent for the purposes of this estimate. Operations experts estimate that service standards result in 15 percent of flats destinating in FSS Zones not being induced on FSS equipment. They do expect this proportion to decline through time as mailer's adjust to the earlier CET required for FSS processing. The FSS machine's "reject rate" – the proportion of flats attempted but not successfully sorted by FSS processing – is estimated to be 10 percent. Cumulatively, the proportion not finalized on FSS equipment for these three reasons is estimated at 24.5 percent.[12] After rounding, this proposal uses 25 percent as the proportion of flats destinating in FSS Zones that are not finalized on FSS equipment.

The second critical element to this proposal is the proportion of flats in FSS trays that are collated with other cased mail by city carriers.[13] City carriers on walking routes[14] or walking portions of routes are restricted to carrying three bundles. In FSS Zones, city letter carriers always have at least three bundles - DPS, FSS, and cased mail. Thus, saturation or EDDM mailings result in the carriers' collating their FSS and cased mail into one bundle to conform to the maximum limit of three bundles. The street cost implication of collating FSS mail is that collated FSS pieces should receive the cased mail marginal cost rather than the higher FSS marginal cost.

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[12] .01 +.15 + (.85 x .1) = .245

[13] It is worth reiterating that the description of this proposal focuses on a post-Proposal Thirteen environment. However, the supporting documentation in USPS-RM2015-16/1 also contains delivery costs under the current method in which the city street unit costs for flats destinating in FSS and non-FSS Zones are equal.

[14] Walking routes are defined to be Park and Loop Routes and Foot Routes.

An estimate of the frequency of a fourth bundle on walking routes is needed so the proper amount of mail receives cased mail rather than FSS marginal costs. As a starting point, for the reasons discussed earlier, 75 percent of flats eligible for FSS processing are finalized on the FSS. Flats finalized on the FSS equipment arrive at the delivery unit in FSS trays. Approximately 60 percent of city routes are walking routes. This is critical because only walking routes are subject to the bundle limit that leads to collating cased mail and FSS mail. Investigation into CCCS data showed that city routes receive roughly one saturation mailing per week, or on one-sixth of the delivery days. The product of these three ratios results in an estimate of 7.5 percent of flats in FSS trays being collated with cased mail.[15] Thus, 7.5 percent of the mail receives the cased mail rather than the FSS marginal costs.

Mechanically, these two proportions are displayed on the 'Inputs' tab of the supporting workbook as part of USPS-RM2015-16/1. They can be adjusted, and any changes would be reflected in the calculated delivery costs.

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[15] 75 percent are finalized via FSS. 60 percent walking routes times 1/6 days with an extra bundle results in $0.75 \times (6/10) \times (1/6) = .075$.

IMPACT

Table 2– Unit Delivery Costs by Product for Flats Destinating in FSS/Non-FSS Zones[1]

Product	City Carrier In-Office Unit Cost	City Carrier Street Unit Cost	City Carrier Total Unit Cost	Rural Carrier Total Unit Cost	City Plus Rural Unit Cost
Periodicals Flats	.0596	.0370	.0966	.0334	.1300
Periodicals Flats Dest. FSS Zones	.0266	.0770	.1035	.0127	.1162
Periodicals Flats Dest. non-FSS Zones	.0675	.0269	.0944	.0383	.1328
Bound Printed Matter Flats	.0466	.0433	.0899	.0331	.1230
Bound Printed Matter Flats Dest.. FSS Zones	.0216	.0758	.0974	.0177	.1150
Bound Printed Matter Flats Dest. non-FSS Zones	.0529	.0346	.0875	.0369	.1244
Standard Flats	.0987	.0444	.1431	.0308	.1740
Standard Flats Dest. FSS Zones	.0431	.0765	.1196	.0125	.1321
Standard Flats Dest. non-FSS Zones	.1173	.0329	.1502	.0370	.1872
Carrier Route Flats	.0478	.0423	.0901	.0307	.1208
Carrier Route Flats Dest. FSS Zones	.0220	.0827	.1047	.0119	.1166
Carrier Route Flats Dest. non-FSS Zones	.0554	.0298	.0852	.0362	.1213

[1]Costs incorporate Docket No. RM2015-7, Proposal 13 (new city carrier street cost model)

Appendix – Notation and Formulas Used in Calculations

Notation:

6.1DirectCasing – 6.1 Direct Casing costs

LetRteDelAct – Letter Route Delivery Activities costs

LetRteDelActCasedMail – Letter Route Delivery Activities Cased Mail costs

LetRteDelActFSS – Letter Route Delivery Activities FSS costs

MarSecCasedMail – Marginal Seconds of street time for Cased Mail under Proposal 13

MarSecFSS– Marginal Seconds of street time for FSS mail under Proposal 13

RPWVol – RPW Volume

%Not Finalized FSS – Proportion of mail destinating in FSS Zones not finalized on FSS

%Collated – Proportion of flats in FSS trays collated with cased mail

LetRteDelAct(FSS→CasedMail) – Letter Route Delivery Activities FSS costs shifted to Cased Mail

LetRteDelAct(≠CasedMail,FSS) – Letter Route Delivery Activities costs from cost pools other than CasedMail or FSS

Rural – Rural carrier costs

RuralFSS – Rural carrier FSS costs.

RuralOtherFlats– Rural carrier Other Flats costs.

Rural(≠FSS,Other Flats) – Rural carrier costs from cost pools other than FSS or Other Flats.

Subscripts

FSS – destinating in FSS Zones

Non-FSS –destinating in non-FSS Zones

i – product

Equations

Cost Segment 6

Disaggregate 6.1 Direct Casing costs to FSS/non-FSS Zones

$$6.1 DirectCa\sin g_{FSS\,j} = \frac{\left(RPW\,Vol_{FSS_j} \times \%\,Not\,Finalized\,FSS\right)}{\left(RPW\,Vol_j - \left(RPW\,Vol_{FSS_j} \times \left(1 - \%\,Not\,Finalized\,FSS\right)\right)\right)} \times 6.1 DirectCa\sin g_j$$

$$6.1 DirectCa\sin g_{non-FSS\,j} = \left(6.1\,Direct\,Ca\sin g_j - 6.1\,DirectCa\sin g_{FSS\,j}\right)$$

Cost Segment 7

Disaggregate Letter Route Delivery Activities Cased Mail costs to FSS/non-FSS Zones

$$LetRteDelA\,ctCasedMail_{FSS\,j} = \frac{\left(RPWVol_{FSS\,j} \times \%\,NotFinaliz\,ed\,FSS\right)}{\left(RPWVol_j - \left(RPWVol_{FSS\,j} \times \left(1 - \%\,NotFinaliz\,ed\,FSS\right)\right)\right)} \times LetRteCase\,dMail_{FSS_j}$$

$$LetRteDelA\,ctCasedMail_{non\,FSS\,j} = \left(LetRteCase\,dMail_j - LetRteCase\,dMail_{FSS\,j}\right)$$

Calculate amount of FSS costs to be shifted to Cased Mail due to collating

$$\left(LetRteDelA\,ct\left(FSS_j \rightarrow CasedMail_{FSS_j}\right)\right) = \left(LetRteDelA\,ctFSS_j \times \%\,Collated\right) \times \left(MarSecCasedMail\middle/ MarSecFSS\right)$$

Calculate remaining amount of Letter Route Delivery Activities FSS costs assigned to FSS Zones

$$LetRteDelA\,ctFSS_{FSS_j} = \left(LetRteDelA\,ctFSS_j - \left(LetRteDelA\,ct\left(FSS \rightarrow CasedMail_{FSS_j}\right)\right)\right)$$

Disaggregate residual (other than Cased Mail or FSS) costs between FSS and non-FSS Zones proportionally based on volume.

$$LetRteDelA\,ct\left(\neq CasedMail, FSS\right)_{FSS_j} = \frac{RPWVol_{FSS_J}}{RPWVol_j} \times \sum_{\neq Cased\,Mail,FSS} LetRteDelA\,ct_j$$

$$LetRteDelA\,ct\left(\neq CasedMail, FSS\right)_{non-FSS_j} = \frac{RPWVol_{non-FSS_J}}{RPWVol_j} \times \sum_{\neq Cased\,Mail,FSS} LetRteDelA\,ct_j$$

Aggregates costs to compute total Letter Route Delivery Activities FSS /non-FSS Zone

$$LetRteDelA\,ct_{FSS_j} = LetRteDelA\,ctCasedMail_{FSS\,j} + \left(LetRteDelA\,ct\left(FSS \rightarrow CasedMail_{FSS_j}\right)\right) + LetRteDelA\,ctFSS_{FSS_j} + LetRteDelA\,ct\left(\neq CasedMail, FSS\right)_{FSS_j}$$

$$LetRteDelA\,ct_{nonFSS_j} = LetRteDelA\,ctCasedMail_{nonFSS\,j} + LetRteDelA\,ct\left(\neq CasedMail, FSS\right)_{non-FSS_j}$$

Inequality showing that disaggregated delivery activities costs are lower than corresponding aggregated costs

$$LetRteDelA\,ct_{FSS_j} + LetRteDelA\,ct_{nonFSS_j} < LetRteDelA\,ct_j$$

Disaggregate Rural Other Flats costs between FSS/non-FSS Zones

$$RuralOtherFlat_{FSS_j} = \frac{\left(RPWVol_{FSS\,j} \times \% NotFinaliz\,ed\ FSS\right)}{\left(RPWVol_j - \left(RPWVol_{FSS\,j} \times \left(1 - \% NotFinaliz\,ed\ FSS\right)\right)\right)} \times RuralOtherFlat_{ji}$$

$$RuralOtherFlat_{non-FSS_j} = \left(RuralOtherFlat_{ji} - RuralOtherFlat_{FSS_j}\right)$$

Formula for computing rural costs for FSS and non-FSS zones

$$Rural_{FSS_j} = RuralFSS_j + RuralOtherFlat_{FSS\,j} + Rural\left(\neq FSS, OtherFlat\right)_{FSS\,j}$$

$$Rural_{non-FSS_j} = RuralOtherFlat_{non-FSS\,j} + Rural\left(\neq FSS, OtherFlat\right)_{non-FSS\,j}$$